

Co-Energy America, Inc.

Eastern Massachusetts High School - Cogeneration Cost Savings Analysis

Year	Forecast Rates		Installation and Operation of Cogeneration Equipment						Savings Summary	
	Forecast Electricity Grid Cost/ kWh (a)	Forecast Natural Gas Tariff	Fuel and Servicing/ Year (c)	Value of Displaced Natural Gas/Year (b)	Effective Cost of Electricity/ Year	Fuel and Servicing/ kWh (c)	Value of Displaced Natural Gas/kWh (b)	Effective Cost of Electricity/ kWh	Annual Savings	Cumulative Savings
2002	\$ 0.107	\$ 0.600	\$143,550	\$ (90,231)	\$ 53,319	\$ 0.066	\$ (0.041)	\$ 0.025	\$ 179,406	\$ 179,406
2003	0.110	0.618	147,308	(92,938)	54,370	0.068	(0.043)	0.025	185,337	364,743
2004	0.114	0.637	151,180	(95,727)	55,453	0.070	(0.044)	0.025	191,445	556,188
2005	0.117	0.656	155,167	(98,598)	56,569	0.071	(0.045)	0.026	197,736	753,924
2006	0.120	0.676	159,274	(101,556)	57,718	0.073	(0.047)	0.027	204,217	958,141
2007	0.124	0.696	163,504	(104,603)	58,901	0.075	(0.048)	0.027	210,891	1,169,032
2008	0.128	0.072	167,861	(107,741)	60,120	0.077	(0.050)	0.028	217,766	1,386,798

Estimated turnkey cost of installation should be between \$440,000 and \$510,000

Estimated payback on investment should be between 2.40 and 2.77 years

Proposed Cogeneration Equipment one model 250-IC (250 kW induction cogeneration system)

		Equipment output		
		Hourly	Monthly	Yearly
Electricity	(kWh)	250	181,250	2,175,000
Heat	(therms)	12.1	8,773	105,276

Assumed thermal efficiency of existing boilers: 70%

% of natural gas used by boilers: 100%

Assumed run hours/month for cogeneration equipment: 725

(a) Utility electricity and gas costs are based on the projected increases stated above.

(b) Value of natural gas that is offset by thermal output of cogeneration equipment, based on forecast natural gas tariff.

(c) Cost of operating cogeneration equipment, based on forecast natural gas tariff.